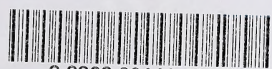


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The Province of Alberta

by G. FRED McNALLY

Alberta Government photos except where otherwise credited

Alberta is the most westerly of the "Prairie Provinces". The designation "prairie", however, may be properly applied to only that section of the province in eastern Alberta lying south of Lac la Biche and east of Stettler. The park land or central region extends roughly from the Red Deer River northwards to the latitude about midway between Edmonton and Athabaska. The forested region predominates and comprises the eastern slopes of the Rocky Mountain foothills belt and that part of the province north and west of

the Athabaska River and north of Lac la Biche.

The province is rectangular in shape except where the Rocky Mountains form the boundary in the southwestern part. Here the dividing line between Alberta and British Columbia follows the irregular crest of the range from the International Boundary northwestward until it reaches the 120th meridian, which is then followed northward to the 60th parallel of latitude. This parallel separates Alberta from the Northwest Territories. Alberta is bordered

At top:—Nature's monument to a general—Mount Eisenhower, near Banff.

COVER SUBJECT:—*The confluence of the Bow River and its tributary the Spray, immediately below Bow Falls, near Banff, Alberta. See companion photograph reproduced on back cover.*

Gordon M. Dallyn

on the east by the 110th meridian which separates it from the Province of Saskatchewan, and on the south by the United States of America. Its width varies from 180 miles at the International Boundary to about 400 miles at its widest part, which is slightly north of Edmonton. Its length from north to south is 760 miles and its area is 255,285 square miles.

Chief Physical Features

The southeastern part of the province consists of rolling and level prairie land, treeless except along the water courses. Here and there the surface is cut by deep valleys through which rapid rivers have poured for ages on their way from the mountains to the sea and in the process have eroded valleys sometimes hundreds of feet deep and a mile or more in width. These great valleys cut out of the level prairie are characteristic of southeastern Alberta. In the western part of the province are the foothills, mostly rounded and grass-covered except on the higher ridges where the prevailing winds have whipped away the soil leaving bare the underlying rock. In the foothills, forest growth makes its appearance and increases into the higher altitudes. Beyond the foothills rise the Rocky Mountains, forested on their lower levels, their upper parts bare, rock-ribbed, or covered with ice and snow.

In the park lands the natural grass is longer and coarser. Dotted here and there are bluffs of native poplar and willow, and gradually the grass gives way to forest cover. In the forested areas deposits of humus due to heavier vegetation result in a rich black soil instead of the chocolate-coloured loam of the prairies.

In that Alberta commands the eastern watershed of the Rocky Mountains, she holds the strategic position with reference to the water supply of the vast territory lying between Ontario and British Columbia. In it are the sources of most of the great rivers traversing the Canadian interior plains and emptying into the Arctic Ocean or Hudson Bay. The Peace and

Athabaska Rivers, whose waters reach the Arctic through the Mackenzie, drain the northern part of the province. In the central section the tributaries of the Saskatchewan reach up along the valleys into the mountains and in places even to the glaciers which form their source. The waters of these tributaries unite to form the North and South Saskatchewan Rivers and these, in turn, come together in the Saskatchewan River near Prince Albert in the Province of Saskatchewan and reach Hudson Bay through the Nelson River. A small part of Alberta is drained to the Gulf of Mexico; the Milk River rises in the Rockies in the State of Montana, passes northward into Canada and, after flowing for more than a hundred miles through Alberta, recrosses the International Boundary and joins the Missouri, a tributary of the Mississippi.

The lakes of Alberta are numerous but, with the exception of Athabaska (most of which is in Saskatchewan), are not large. The total fresh water area of the province is about 6,500 square miles. Hundreds of lakes throughout the mountain area contribute to Alberta's fame as a province of great beauty as well as great variety. For example, Lake Louise, Bow Lake, Lake Minnewanka, Lake Beauvert, and the Waterton Lakes are known the world over.

Climate

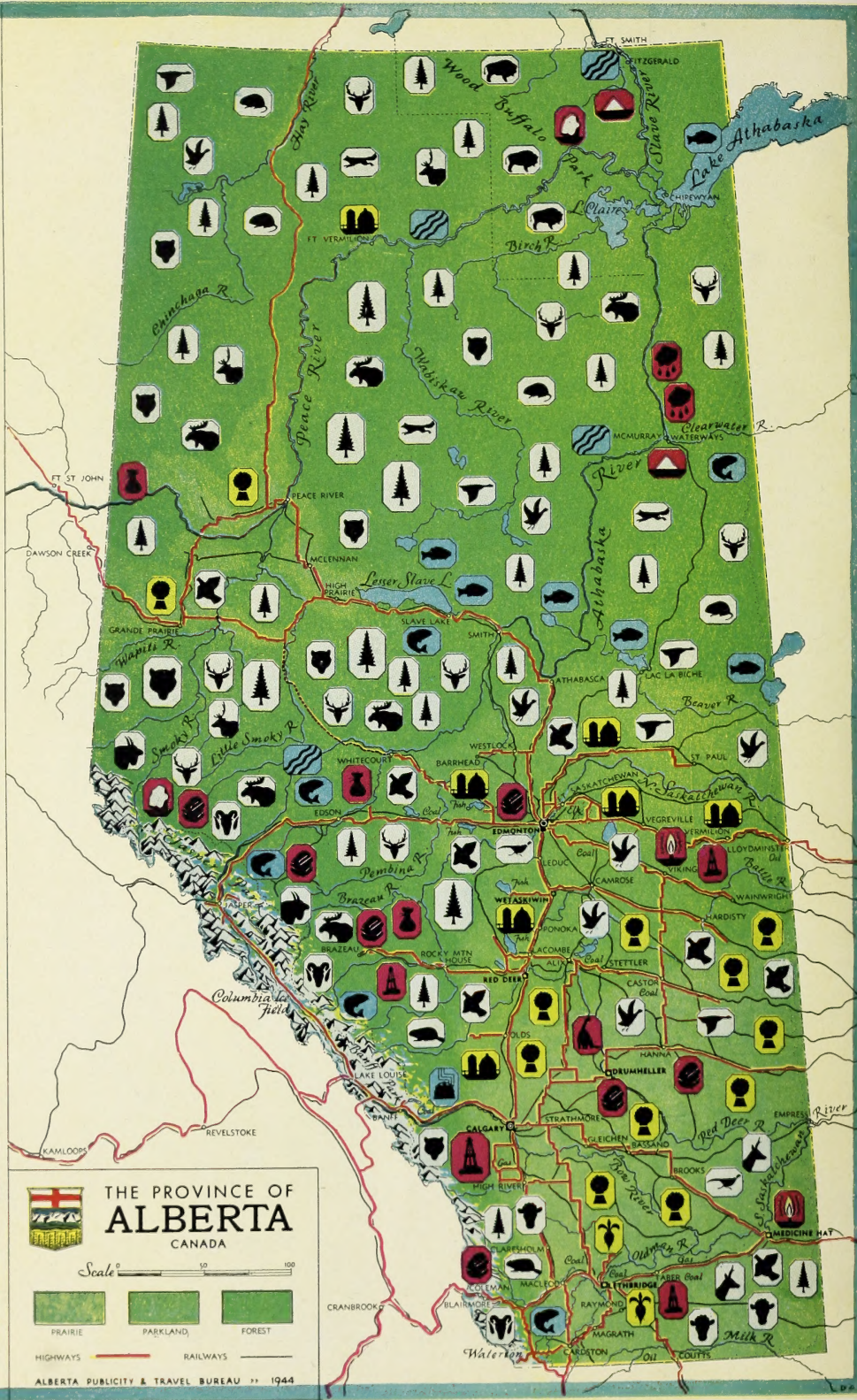
Three principal factors determine the climate of Alberta—latitude, altitude, and

Eisenhower Lodge, Banff National Park.

H. Pollard photo



- ANTELOPE 
- BEAR 
- BEAVER 
- BUFFALO 
- CARIBOU 
- DEER 
- DUCK 
- FISH COMMERCIAL 
- FISH GAME 
- FOX 
- GEESSE 
- MOUNTAIN GOAT 
- MOOSE 
- MUSKRAT 
- PARTRIDGE AND GROUSE 
- PHEASANT 
- MOUNTAIN SHEEP 
- TIMBER 
- GRAIN 
- MIXED FARMING 
- RANCHING 
- SUGAR 
- WATER POWER DEVELOPED 
- WATER POWER UNDEVELOPED 
- COAL 
- PETROLEUM 
- NATURAL GAS 
- OIL SANDS 
- SALT 
- GYPSUM 
- GLACIER GOLD 
- FOSSILS 



THE PROVINCE OF ALBERTA CANADA

Scale 0 50 100



HIGHWAYS RAILWAYS

ALBERTA PUBLICITY & TRAVEL BUREAU 1944

*Glacier-fed Maligne
Lake in Jasper
National Park.*

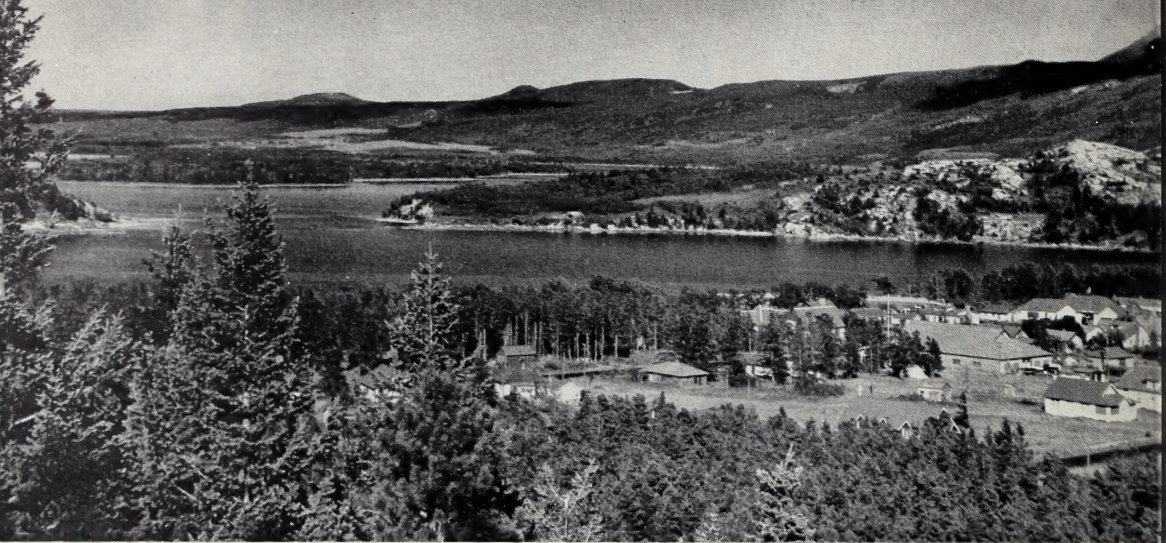


proximity to the Rocky Mountains. Of these, latitude is perhaps of least significance. Alberta is in the same latitude (49 to 60 degrees north) as the bleak coasts of Labrador, but also in the same latitude as the green meadows of England. Edmonton is in a latitude somewhat south of Moscow, and Calgary is in about the same latitude as London, England. This is the latitude of the central belt of the North Temperate Zone and the climate may be said to be characteristic of that zone within the wide range of extremes just indicated.

Contrary to general opinion, latitude is not so important as altitude in determining climate. The altitude of Alberta rises westward from 699 feet above sea-level at Lake Athabaska in the northeast corner and 2,181 feet at Medicine Hat near the southeastern corner of the province by easy stages to the Rocky Mountain foothills and then much more rapidly to the crest of the Rocky Mountains which forms the boundary between Alberta and British Columbia, culminating in peaks over 12,000 feet in height. This range in altitude

indicates a wide range in temperature; also, as the northern parts of the province are lower than the southern, the increase in latitude is to some extent off-set by the lower altitude. For example, the extreme temperatures at Edmonton vary little from those at Calgary, 200 miles to the south, because the altitude of Calgary is 3,438 feet while that of Edmonton is only 2,194 feet; and the Peace River District, although far north of Edmonton, has a somewhat similar climate because its altitude is almost a thousand feet lower.

The great height and width of the Rocky Mountain range which forms the southwestern border of the province, and lies to the west of it in the northern part, have an important effect on the climate of the whole Canadian plains region and particularly of Alberta. The mountains cut off the natural flow of moist air from the Pacific Ocean with the result that Alberta, and especially southern Alberta which is nearest to the mountains, is an area of low precipitation. Combined rainfall and snowfall in Alberta are less than half as much



Narrows of Waterton Lake, from the foot of Mount Crandell.

as in Ontario. For the same reason, combined with altitude, the air is remarkably clear, and there is a high percentage of bright sunshiny days, a fact which has gained for the province the widely known title "Sunny Alberta".

An extraordinary feature of the Alberta climate is the chinook, a current of air descending from the high levels of the mountains which, warmed by its own increasing pressure, spreads over the foothills and plains, particularly of southern Alberta, as a warm, dry wind. The chinook shortens the winters and moderates the severity of temperature in the areas affected by it. There are therefore three influences tending to moderate the climate of Alberta: the chinook winds, tempering the winters; the mountain barrier, which shuts off moist and humid atmosphere; and the altitude, which results in a crisp, sparkling sunshine not often found at lower levels.

Historical Background

There are few areas in America which give evidence of such an interesting geological history. The deep gorges through the Alberta plains are an open book carrying the trained eye back to the creative processes of past ages. Skeletons of dinosaurs found in the vicinity of

the Red Deer River tell of a time when much of the prairie provinces was covered by the sea and the climate was as warm as Florida is today. The swamps and forests of that long ago age furnished the vegetable material which has been converted into the famous coal deposits of Alberta, and the slow contraction of the earth resulted in the raising of the Rocky Mountains to become the outstanding feature of the province.

For generations the Indians were the only inhabitants of these plains. There has been much speculation as to whence and when the Red Men came. Scholars now believe that they are distant cousins of the Chinese and Japanese who came across the North Pacific at the narrow part where North America and Asia thrust out fingers in a vain attempt to meet. When they came or in how great numbers no one knows. It must have been centuries ago. Someone has estimated that when the white men came not less than one hundred thousand Indians roamed the plains between Hudson Bay and the Rocky Mountains.

The first white men were attracted by their urge for exploration, or by the profits of the fur trade. Earliest among them was a French Canadian named De Niverville who, about 200 years ago, is believed to have travelled as far west as the Rocky

Mountains. Anthony Henday (sometimes spelt Hendry), for the Hudson's Bay Company, in 1754 crossed the South Saskatchewan near Saskatoon and wandered over the great plains between the two rivers where never a white man had set foot before. He followed the trail of a band of Blackfeet who were hunting buffalo. Henday had never seen Indians on horseback and determined to catch up with them. Shortly after he overtook the Blackfeet and was invited to join the hunt. Henday's diary gives one of the earliest descriptions of the manner in which the Indians hunted buffalo with bows and arrows. He spent the winter on the Red Deer River just east of the Calgary-Edmonton trail and in the spring returned to York Factory by way of the Saskatchewan.

For the next fifty years there was a race between the Hudson's Bay Company and the North West Company of Montreal for the possession of the fur trade of the Northwest. One of the ablest of the Nor'Westers was Alexander Mackenzie who in 1787 was placed in charge of the Company's trade in the Athabaskan region. From his headquarters at Fort Chipewyan on Lake Athabaska he led an expedition down the Mackenzie River to the Arctic Ocean. Four years later, in 1793, he ascended the

Peace River to its headwaters, crossed the Rockies by the Peace River Pass, and descended the Fraser as far as it was navigable. From this point he struck out westward overland and at last reached the Pacific—the first white man to cross the continent of North America in either Canada or the United States.

Another early explorer of Alberta rivers was David Thompson who has been described as "the greatest land geographer that ever lived". Besides exploring the upper waters of the North Saskatchewan, Athabaska and Peace Rivers, he is said to have visited the Bow River, near the present site of Calgary, in 1801. Some years before this the rival companies had established Fort Augustus (Nor'Westers) and Fort Edmonton (H.B.Co.) about twenty miles from the present location of the city of Edmonton.

In the early days the interest of the white man in what is now Alberta was confined almost entirely to fur trading, exploration, and Christianizing the natives. The strife between the rival companies became more and more bitter until there was practically open war. When it became apparent that this situation could not continue, negotiations brought about a union of the two organizations under the name of The Hudson's Bay Company. From then on the

*Sunset sailing on
Lake Wabamum, west
of Edmonton.*

Alfred Blyth Studios photo



affairs of the vast area moved peacefully, though with little evidence of progress, until Confederation in 1867.

The year 1867 saw a turning point in the history of the Canadian West as well as in that of the eastern provinces. The Fathers of Confederation had envisaged a dominion that would reach from sea to sea. That this vision might be realized the Canadian Government, two years after Confederation, bought the ownership of the territory from the Hudson's Bay Company for \$1,500,000 and certain grants of land. The country was now to be called The Northwest Territories.

While it was true that Canada had bought the territory from the great company it had not taken the trouble to explain to the settlers, of whom there were 12,000, either that their rights would be protected or the purpose of the Government in acquiring possession of this great area. When surveyors appeared, the settlers concluded that they were about to lose their lands. The result was a rebellion against the authority of the Canadian Government. Canada now did what it should have done at the outset—selected a wise and understanding man to reassure the settlers and explain the Government's policies. This man, who through long service with the Hudson's Bay Company had come to know the country and its people, was the distinguished western Canadian who later became Lord Strathcona. One of the outcomes was the establishment of the Province of Manitoba which entered Confederation in 1870.

For the administration of the area the Canadian Government set up the Northwest Territories' organization consisting of four territories—Assiniboia, Saskatchewan, Athabaska, and Alberta. It is at this point that the name Alberta was first used to designate a geographic unit in Canada. The Marquis of Lorne, Governor-General of Canada (1878-1882), was invited to name one of the provisional districts then being set up in Western Canada. He chose

the favourite name of his wife H.R.H. The Princess Louise Caroline Alberta.

To maintain law and order the Canadian Government organized the North West Mounted Police. The Indians had already learned to respect the courage and integrity of the red-coated British soldiers so a tunic of the same colour was selected for the new force, which was set up on a semi-military basis. In July, 1874, the march of the Mounties began across the thousand-mile wilderness between the Red River and the Rockies. One division of this force reached Fort Edmonton in October; the other, under Lt.-Colonel Macleod, established a fort near the site of the town in southern Alberta which now bears his name. The following year a post, at first called Fort Brisebois, was established on the Bow River. The name of this fort was changed by Colonel Macleod to Calgary, in honour of his birthplace in Scotland.

With law and order assured, and a railway in prospect, settlement began to trickle in. But a few years later the peace of the area was rudely disturbed. The federal government had decided to introduce a new system of surveys—the one we are all familiar with—by which all farms were to be square blocks. The half-breed settlers were accustomed to long narrow strips running back from the rivers; no attempt had been made to inform them that they would get as much land as they now held, though of a different shape. Louis Riel, who had led the rebellion mentioned earlier and had taken refuge in the United States, returned to Canada to lead the half-breeds and Indians in armed resistance to the Canadian authorities. Settlers in the area along the North Saskatchewan River took refuge in the Hudson's Bay fort at Edmonton and for a time the situation seemed critical, but a column under General Strange marched north from Calgary and upon its arrival the rebellion was over so far as Edmonton was concerned. The disturbance centralized in what is now the Province of Saskatchewan, and Alberta escaped with little





Calgary in 1890. The building



An early drawing of the Hudson's Bay Company trading post and Mounted Police post at Calgary in 1877.
From drawing by Stafford

Sarcee Indians at the Hudson's Bay Company trading post in the early days of Calgary.
Marcell photo





th the tower is the first fire hall.
Pollard photo

more than a short but severe period of uneasiness and alarm. So ended the first and last attempt to overthrow authority in Alberta by armed force.

In 1905 the District of Alberta, with the western half of Athabaska and a strip of Assiniboia and Saskatchewan, was created a province of Canada with Edmonton as its capital.

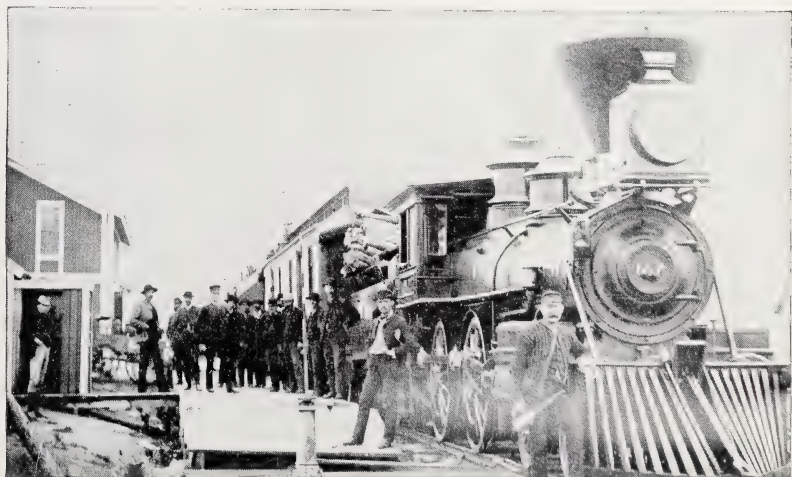
Settlement

Throughout all its early history Alberta was a wilderness considered valuable only for its production of fur and buffalo meat. The assurance of a railway, however, opened prospects of development to which the fur traders had either been blind or unsympathetic for two centuries. Obviously plains which had supported millions of

buffalo would support cattle and adventurous souls from the British Isles, from France, the United States, and Eastern Canada, began to move in—trailing their small herds into the shelter of the foothill valleys for the winter and letting them range on the plains in summer. As early as 1881 the ranching industry had advanced to a point where the Canadian Government made regulations permitting the leasing of areas up to one hundred thousand acres each to ranchers at a rental of one cent an acre per year, subject to certain conditions as to the grazing of cattle. Cattle ranching, therefore, became big business. With it was coupled, although developed to a smaller degree, the raising of horses and sheep.

Calgary station in 1884; the main line reached this point the previous year.

C.P.R. photo





Cattle on one of the huge ranches in southern Alberta moving to a new range.

Just as the fur trader discouraged the cattle rancher so, in turn, the cattle rancher proceeded to discourage the wheat farmer. Each new development was an encroachment on the established order of things and was accepted only under pressure rather than welcomed as an evidence of progress. The ranchers did everything possible to keep land from being surveyed and opened for homesteading. But two facts could not be concealed: the fact that the climate was healthful and invigorating and the severe cold, of which they made much, lasted for short periods only; and the fact that the soil was amazingly fertile. Throughout the plains section of Alberta the rainfall was often insufficient to produce crops at their best; but when wet seasons came, as they frequently did, the production was almost unbelievable.

By 1890 considerable numbers of farm settlers were moving into Alberta. The public lands were under the administra-

tion of the Dominion Government, which had adopted a policy of granting free farms to settlers who would live on them and make certain specified improvements.

Majestic buffalo grazing in Elk Island National Park.

Albert Blyth Studios
photo



The Canadian Pacific Railway also received large grants of land in return for the building of the railway and these were offered to settlers under a policy designed to increase traffic for the road rather than immediate cash returns to its treasury. As the southern part of the province was mostly open prairie it was more easily brought under cultivation than the land farther north; the natural result was that the southern part became mostly devoted to grain growing while in the park lands of the central section mixed farming and the dairy industry made greater progress. With the application of science to farm practice the various types of farming best suited to the area make for a varied pattern.

The south includes large areas of great fertility but where rainfall is frequently too light to produce profitable crops. Fortunately, however, the areas characterized by long, level, gentle slopes lend themselves to irrigation practices; and the many rivers coming down from the mountains furnish an unfailing supply of water. Even in the early days some ranchers had diverted water from the streams to ensure green meadows for their cattle and a certain

amount of grain and vegetable production for their own use. The ranchers' success and the general favourable conditions led to irrigation enterprises on a large scale. The pioneer among such undertakings was the Alberta Railway and Irrigation System which watered a large area in the Lethbridge district, thus making over six hundred thousand acres of first quality farm land entirely independent of rainfall. Extensions to existing projects and the completion of the proposed Red Deer diversion project will add nearly one million acres more.

The chief crop of irrigated areas in this region is probably alfalfa, the basis of an important hog-raising and dairying industry. Nearly thirty thousand acres are under crop to sugar beets, and produce over one hundred million pounds of sugar yearly. The production of corn, vegetables, and small fruits has resulted in maintaining an important canning industry.

In 1902 an irrigation department was organized by the Canadian Pacific Railway, with headquarters at Calgary, and an area of some 3,000,000 acres to the southeast of that city was laid out for irrigation development. Later the Canada Land and





The municipal airport at Calgary.

Rosettis Studios photo

Irrigation Company developed a large and fruitful area to the west of Medicine Hat. Other developments followed. Today there are thirteen separate irrigation districts and 630 private irrigation schemes in operation. These have already given a variety and stability to Alberta agriculture which otherwise would not have been possible.

Agriculture

Alberta's principal farm crop is wheat which is grown successfully from the United States border to the Peace River Valley in the far northwestern part of the province. Alberta's production of wheat in 1947 was placed at 103,000,000 bushels. The quality of the wheat grown in this province may be judged from the fact that on several occasions it has been awarded the world's highest standing at the international competition at Chicago. The first time this award was made (1893) it came to Alberta. The wheat was grown by John Gough Brick at Shaftesbury on the Peace River. It was hauled to Grouard by oxen and from there to Edmonton by dog train. In 1947, Sidney J. Allsop of Red Deer was adjudged "Wheat King" of North America, also at the Chicago Exposition. His sample of *Reward* variety of hard red spring wheat was judged the finest of 3,000 choice samples in the show. Oats of equally high quality follow with a yield in 1947 of 75,000,000 bushels; the barley crop was 52,000,000, rye 4,250,000, and flax seed 2,150,000 bushels. "The

basic grains are only part of the harvest from rich Alberta soil. Seed crops, hay, and other fodder crops netted Albertans over \$35,000,000 last year.

"The cattle ranches have by no means disappeared. Two million cattle feed annually on lush grass-lands, or fatten to top quality in countless Alberta feed lots. Dairy herds throughout the province, especially in the mixed farming area around Edmonton, bring Alberta well to the front in the production of dairy foods. Alberta's hog population has twice given her the biggest output of any province in Canada, and her sheep and lamb population is well over a million."*

With an agricultural area estimated at approximately 100,000,000 acres, of which as yet only about 20,000,000 acres are under cultivation, it is apparent that the farm lands of Alberta are still far from their possible maximum production.

Transportation

The earliest transportation in Alberta was by canoe, on horseback, or on foot. Under such conditions it was impossible to develop export trade except in commodities like furs, which are of great value in comparison with their weight. In time the Red River carts began to creak their slow way across the prairies westward from Fort Garry, and wagon routes were established from points in the United States. The fast-flowing rivers of the southern part of the province did not lend themselves to the use of large boats but by 1872 flat-

*Hon. A. J. Hooke in Canadian Geographical Journal, October, 1947.

Top right:—A cruise boat in the shelter of the peaks in Waterton Lakes National Park, on the southern border of Alberta.

Bottom right:—A highway from Edmonton connects with the Alaska Highway at Dawson Creek, B.C. and is the beginning of the long run to the Yukon and Alaska. Alfred Blyth Studios photo





bottomed stern-wheel steamers were plying the Saskatchewan River from Lake Winnipeg to Edmonton. Development of the resources of Alberta on any large scale, however, awaited the coming of the railway.

The building of a transcontinental railway through Canada was a condition of British Columbia's entry into the Confederation. It was at first expected that the railway would follow the northern route via Edmonton and the North Saskatchewan River but the course finally selected followed the Bow River, past the hamlet of Calgary, and into British Columbia through the Kicking Horse Pass. The main line of the Canadian Pacific Railway reached Calgary in 1883 and for the first time Alberta was connected with Eastern Canada by a transportation system capable of carrying passengers and heavy freight swiftly and at comparatively low cost.

The railway was undertaken at first as a government project because no private company could be found willing to invest so much money. Finally the Canadian Pacific Railway was formed and a contract was entered into whereby the Government agreed to give the Company twenty-five million dollars and twenty-five million acres of land. The Company undertook to have the road completed in ten years, that is by 1891. Actually, it was completed in

1885. Naturally this bargain was regarded by many people in the East as foolhardy and extravagant in the extreme. It was too much, they said, to pay for two "streaks of rust" across a country never likely to be able to support a population. But settlement not only accompanied the railway; it crowded in ahead in anticipation of its coming and this has been the experience in all parts of Alberta. Optimistic homesteaders with the assurance, or at least the expectation, that they would soon be followed by railways have penetrated into even the remote parts of the province. The expectation, in most cases, has been realized. Branch lines have been thrown out from the main trunk of the railway; from Medicine Hat to Lethbridge to Macleod and ultimately through the Crow'snest Pass to British Columbia; from Calgary to Edmonton and from Calgary to Macleod and Lethbridge. Eventually the Canadian Northern Railway (now included in the Canadian National Railways) entered the province, reaching Edmonton in 1905. With the growing importance of the north-land a line was built to Waterways to connect with the Mackenzie River navigation system and another into the Peace River Valley to serve the settlers in that fertile area; these railways are operated jointly by the C.N.R. and the C.P.R. Alberta now has three railways through

Left:—When an oil well first "blows in" the oil and natural gas coming up from the producing formation below are contaminated with mud, water and chemicals used in drilling the hole. Since these would contaminate the storage tanks the flow is turned into a flare and burned for a few minutes until the well cleans itself out. This is common oil well procedure. Imperial Leduc No. 3 is shown blowing into production on May 21, 1947.

Right:—The refinery used during the war at Whitehorse, Alaska, being moved in sections to Edmonton. Trucks are more like trains than highway vehicles.

Imperial Oil photos





Air view of Edmonton's municipal airport which handles largest freight tonnage of any airport in North America.

the mountains, and the southern half of the province is so criss-crossed with lines that almost any settlement is within easy reach of rail transportation.

But another method of transportation was hard on the heels of the railways. The invention of the automobile introduced motor cars, trucks, and buses, which in turn demanded good highways for the best operation. Throughout the prairie sections of Alberta passable roads are very easily made except for the crossings of the great river valleys which cut the plains from east to west. In the forested districts and in the mountains road-building presents a greater problem. Alberta, like other Canadian provinces, has also the special problem that its road mileage, in proportion to population, is enormous. However, good progress has been made. There are 646 miles of hard surfaced highways, 3,378 miles of gravelled main and secondary highways, 6,325 miles of gravelled district and local roads and 24,716 miles of graded

roads in Alberta. As well as serving the local population, highways are an important factor in promoting the growing tourist business of the province.

Still later has come the most remarkable transportation development of all—the staging of Alberta on the aerial highways of the world. This has been mainly determined by its strategic location. A climate which usually assures perfect flying weather has also been a factor. During World War II Edmonton became a great base of flying operations by United States and other allied nations and new airways were explored which are not likely to be abandoned in times of peace. Discovery of precious metals, and other developments in the great North, where there are no railways or highways and where the river courses are open for only a few months in the year, gave a great impetus to commercial flying and Edmonton became one of the most important air-freight shipping points in the world. This development is only in its in-

fancy and air travel in Alberta may be expected to increase at least in proportion to the growing importance of the province's trade and industry. Steamship service on the Mackenzie River system continues to be a factor in Alberta's trade and travel connections with the Northwest Territories and the Arctic Ocean.

Natural Resources

While undoubtedly Alberta's greatest natural resource is her fertile farm lands, she has also been generously endowed with the essentials of a vast industrial enterprise. She possesses more coal than all the other provinces of Canada combined. She produces more oil and natural gas than all the other provinces combined. Her bituminous sand deposits are regarded as the greatest in the world. Nearly fifty-three per cent of the land of the province is forested, the area being estimated at more than 130,000 square miles. Much of the province is a natural fur-producing

wild life country. The commercial fisheries are important. The rivers flowing down from the mountains are substantial sources for the development of water power. Salt, limestone, ceramic clays, and the ingredients of building cement are present in great quantities. Her scenic resources are the basis of an ever-expanding tourist industry. With so much natural wealth of her own and commanding the treasure houses of the great North, with beautiful landscapes and a friendly climate which make the province a pleasant land in which to live, the limits of Alberta's future development are hard to set.

According to the most recent surveys the estimated coal reserves of Alberta, readily mined by present-day methods, amount to over 46,000,000,000 tons. This is sufficient to keep up the present rate of production for many centuries. The deposits, first disclosed along the deep-cut river banks where the settlers gathered their own coal with wagon and shovel,

Mountain streams provide good sport for the angler. Scene in Jasper National Park.





Powerhouse and spillway at new Barrier Dam, Kananaskis Valley.

underlie and are worked in many parts of the province. The coal is mostly bituminous (roughly 60 per cent) although there is a little anthracite in the mountain areas. The remainder is sub-bituminous and lignite or domestic. The production in 1947 amounted to approximately 8,000,000

tons with a value of about \$36,000,000.

It has long been known that there is oil in the rock formations of Alberta. The earliest recorded production was in 1886 but it was not until 1914, with the discovery of the Turner Valley oil field, that production on a commercial basis became



The Drumheller Valley is a major source of Alberta's coal revenue. Red Deer River is on the left.

H. Pollard photos

possible and the future of Alberta as an oil-producing area was established. Turner Valley became the second greatest oil field in the British Empire; it accounted for ninety-four per cent of all the oil produced in Canada. In recent years the flow from Turner Valley has been decreasing. For a long time the great need has been a second major field. The discovery of such an area at Leduc was made early in 1947 when the Imperial Leduc No. 1 well came into production. By the end of the year twenty-three wells of the same class were producing with a daily average of 3,300 barrels per day of high quality oil.

A new oil refinery is now under construction at Edmonton by Imperial Oil Limited. The wartime refinery at Whitehorse, Alaska, was purchased by the company, dismantled, and the sections shipped to Edmonton via the Alaska Highway to Dawson Creek and thence by rail to the

site in Edmonton. This important addition to Edmonton's industrial life may cost ten million dollars or even more. Added to this there is to be a lubrication plant costing three to four million dollars for the recovery of the lubricant content of Leduc oil.

When producing wells reach a total of from 150 to 160, production from the Leduc field will be in the neighbourhood of 20,000 barrels per day.

Natural gas is usually found in the same strata as the oil and Alberta's resources of natural gas are widespread. Alberta was famous for natural gas before either coal or oil had been given much prominence among the province's resources. The first extensive development was at Medicine Hat which became known as the gas city of the Dominion. Since that time much of the province has come to use natural gas for heating—a clean, cheap, convenient

British-American Oil Refinery, and Inglewood Golf Course, Calgary.

H. Pollard photo





Above:—Kiln and plant of Alberta Clay Products Limited, Medicine Hat.

Above:—Putting the finishing touches to Alberta-made furniture.
Alfred Blyth Studios photo

Top:—Plant of the Central Alberta Dairy Pool at Red Deer.

Top:—Stock pile of beets at the plant of Canadian Sugar Factory Limited, Raymond.
H. Pollard photo

fuel. In addition to Medicine Hat cities like Lethbridge, Calgary, Red Deer, Wetaskiwin and Edmonton, towns such as Vermilion, Wainwright, Camrose, Lacombe, High River, Claresholm and Macleod, and a great number of smaller communities, use great quantities of natural gas much of which has been a by-product of oil drilling operations. Gas is used extensively in industrial work, notably in the ceramic industries at Medicine Hat and the glass works at Redcliff; it also affords cheap heat for extensive greenhouse industries. It is a convenient source of power although it is now being replaced by hydro-electric

energy. Alberta produces six times as much natural gas as all the other provinces combined. One of the obvious results of the use of natural gas commented on by every visitor is that the buildings in cities and towns look so fresh and clean. This is due partly to sunny skies and high altitudes but most of all to the almost complete absence of smoke from the atmosphere.

A unique natural resource in Alberta is the bituminous sands which occupy an area of 30,000 square miles in the neighbourhood of McMurray on the Athabaska River. These so called tar sands are areas which have been saturated with crude

Opposite page:—

Modern mechanization is a feature of Albertan agriculture, where rows of elevators dominate the vast, flat, grain fields. Inset—a fine crop of high quality oats.

Top photo, Alfred Blyth Studios
Inset, H. Pollard photo





Gently rolling slopes provide ideal grazing conditions for Alberta's sheep population, which brings in an annual revenue of almost eight million dollars

H. Pollard photo

petroleum. Estimates of the amount of oil which these sands contain range from one hundred thousand million to two hundred and fifty thousand million barrels. Completely satisfactory processes of extracting the oil from the sand have not yet been devised but a new plant of increased capacity is under construction at Bitumount. It is expected that, as a result of further experimentation at Bitumount, a new and promising process will result in the recovery of this oil on a basis which will enable it to compete with other oils in the province. Meanwhile the bituminous sand makes excellent material for surfacing roads and aeroplane runways and is being extensively used for such purposes.

Another mineral of importance in Alberta is salt. In the McMurray district are

areas with salt deposits 200 feet thick and yielding an estimated 500,000 tons to the acre. Oil drillers in the Vermilion district discovered a salt bed 500 feet thick which promises to become the basis of an important salt industry. Other minerals found in Alberta include paint shales, talc, limestone, and the ingredients of cement, clay products, fertilizers, and ammonia. The value of Alberta's mineral production was over \$62,000,000 in 1947.

The forests of Alberta support an important lumbering industry and are also of great value to settlers for use as fuel, fencing, and building material. The forests also serve as shelter and protection for wild animals, some of which are hunted as game and some shot or trapped for their furs. Indeed, the fur resources, which first attracted the white man to Alberta, are still of considerable importance. Large numbers of muskrat, fox, marten, weasel, beaver, squirrel and lynx are still taken in their wild state, and in addition more than 1,200 fur farms are raising fur animals in captivity. The total value of Alberta's fur production amounts to about \$5,000,000 a year.

The forests are of great importance not only to Alberta but to all Western Canada



Workers in a garment factory at Edmonton.

Alfred Blyth Studios photo

because they retard the surface run-off of water on the eastern watershed of the Rocky Mountains and so help to conserve and regulate the stream flow. Recently the Government of Canada has joined with Alberta in the setting up of a joint conservation authority whose responsibility it will be to see that this natural regulation of water distribution from this area is fully protected. On their way to lower levels these waters produce the electric power which turns the wheels of industry, lights the streets, cooks the meals, and lights the homes of thousands of Alberta families. At ordinary flow the rivers of Alberta are capable of producing 1,250,000 horsepower, not more than one-tenth of which has been developed. Even with this limited development, hydro-electric energy is available for light, heat, and power purposes in the principal centres and also in a growing network throughout the country. A power commission is conducting research with a view to the electrification of Alberta's rural districts.

Alberta's mountains, lakes, and rivers provide a scenic background of great commercial as well as aesthetic importance. Such well known places as Banff, Waterton, Lake Louise and Lac Beauvert are rivalled by a hundred others less famous but no less entrancing. These

beautiful places have been a great factor in the growth of Canada's tourist business which brings millions of dollars into the country, a business which is growing rapidly. No greater tribute to Alberta's scenery can be paid than to cite the fact that of the scenic areas set aside by the Dominion Government as national parks more than half the total is located in this one western province.

Another resource arising out of Alberta's lakes and rivers is a business of some importance in both game and commercial fish. Game fish are a delight to the local resident and an important lure in attracting tourists. To assure continuity of the supply, fish hatcheries are operated by the Provincial Government and by the Dominion Government in the national parks where many of the rivers have their headwaters. Lakes in the northern part of the province yielded commercial fish to a value of over \$1,300,000 in 1946 and of a quality which commands a market as far away as Chicago and New York.

Industrial Development

The industries of Alberta are mainly based upon agriculture and the other natural resources of the province. Arising directly out of agriculture are the slaughtering and meat-packing industries which in

In 1946 Alberta's hog production returned over twenty-one million dollars.



1945 employed almost 4,000 people and had an output worth more than \$92,000,000; butter and cheese factories which employed nearly 1,500 people and had an output of over \$17,000,000; and flour and feed mills with an output of \$23,000,000. The sugar and canning industries are also directly dependent upon farm production.

Industries other than primary in the order of the value of their output, exceeding \$1,000,000 in 1945, include: petroleum products, breweries, sugar refineries, bread and other bakery products, sawmills, planing mills and sash and door factories, acids, alkalis and salts, railway rolling stock, printing and publishing, miscellaneous foods, stock and poultry feeds, processed cheese, glass products, men's factory made clothing, wood preservation, iron and steel products, iron castings, fruit and vegetable preparations, printing and bookbinding, malt mills, wooden boxes, clay products from domestic clay, cement, aerated and mineral waters. These, with many other smaller industries (less than a million dollars), round out the industrial life of the province. The total value of goods manufactured in Alberta amounted to \$263,000,000 in 1947.

Railroading affords a large amount of employment as do also motor transport, freight and passenger traffic by air, and the broad range of services engaged in catering to the travelling public and the tourist business. There is also a large business in the buying and selling of goods required by the people of the province and in exporting their surplus products.

Cities and Towns

The growth of industrial and commercial enterprises has naturally resulted in the growth of cities and important towns. Edmonton, the capital, (population 113,116) is built on both sides of the North Saskatchewan River at a point close to the geographical centre of the province. It is the seat not only of the Legislature but of the provincially-owned University of Alberta.





An aerial view of central part of Calgary, looking northwards across the Bow River.

Photo by Lorne Barkell

It is one of the oldest centres of population in Western Canada with a history reaching back into the eighteenth century. The industries mentioned in the preceding section are well represented, with meat-packing taking the lead. Located on the main line of the Canadian National Railways, Edmonton is also served by the Canadian Pacific Railway and the railways leading to Waterways and the Peace River District. As the most northerly large centre in Alberta, Edmonton is the gateway to the Mackenzie River country and the great North generally, with which it enjoys a large and increasing commerce.

Calgary (population 100,044) is the other chief industrial and commercial centre. Calgary is 200 miles south of Edmonton at the junction of the Bow and Elbow Rivers just where the prairies begin to give place to the foothills. Its history goes back only to 1875 when Colonel Macleod selected its strategic position as the location for a Mounted Police post. It is on the main line of the Canadian Pacific Railway and is also served by the Canadian National Railways and branch lines to the south, east, and north. Calgary occupies an important place in air travel and is the southern centre of Alberta's network of motor roads. It is the chief gateway for tourist and other travel entering the mountains from the east and south. Its location close to the Turner Valley oil field has made it an oil-refining centre of much importance. Other leading industries are meat-packing, flour-milling, petroleum products, and the manufacture of acids, alkalis and salts. Calgary is the highest city in Canada (altitude 3,438 feet) and the nearest to the Rocky Mountains, and enjoys a particularly sunny and invigorating climate.

Lethbridge (population 16,522) is in the great plains country 125 miles southeast of Calgary. It is the centre of an important coal area and serves a fine agricultural country including some of the most highly developed irrigated lands in Alberta. The leading industries in 1945 were breweries,

Campus and buildings of University of Alberta, at Edmonton.

McDermid Studio photo



flour mills and vegetable preparations. The city is built on a level plain adjoining the great gorge cut by the Oldman River on its way from the mountains to join the Bow River farther down. It is served by the Crownsnest and other lines of the Canadian Pacific Railway and is on the main route of Trans-Canada Air Lines. Its altitude is 2,983 feet and it rivals Calgary as a city of sunshine.

Medicine Hat (population 12,859) lies in the deep valley of the South Saskatchewan River not far from the eastern boundary of the province. Its altitude (2,181 feet) is the lowest of any Alberta city, although only 13 feet lower than Edmonton, and its summer temperature is the highest. Medicine Hat has long been famous as the "gas city" of Canada, and natural gas, which supplies heat and power at very low cost, has played a large part in its development. Chief among its industries are pottery works, flour mills, and vegetable oil mills; the city is also an important divisional point on the Canadian Pacific Railway and has a considerable population engaged in railway operations.

Drumheller is a coal-mining city located on the Red Deer River 100 miles northeast of Calgary. Red Deer and Wetaskiwin are important commercial centres in the rich mixed farming district which lies between

Main building of The Provincial Institute of Technology and Art, Calgary.

Oliver Studio photo





Calgary and Edmonton. Blairmore, Camrose, Cardston, Edson, Fort Saskatchewan, Grande Prairie, Hanna, Lacombe, Macleod, Peace River, Pincher Creek, Raymond, Rocky Mountain House, St. Paul des Métis, Stettler, Tofield, Vegreville, Vermilion, Wainwright, and many other towns and villages cater to the commercial needs of their communities and are local centres of social life and education.

Education

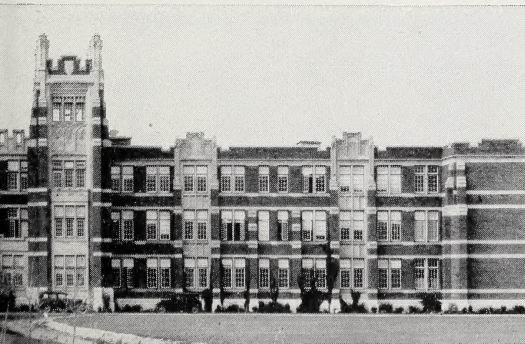
The people of Alberta attach great value to education. In almost every town, village, or rural area the outstanding building is the school. Education in the state-supported schools is free and compulsory; that is, no direct charge is made to the pupil or his parents, the cost of operating the schools being borne partly by local taxation and partly by vote of the Legislature, and children between certain ages are required to attend. More than 156,000 pupils attend these schools.

The school system consists of three divisions: Elementary (Grades I-VI), Intermediate (Grades VII-IX), Secondary (Grades X-XII). A few years ago an important change in the administration of rural education was introduced. The entire province was divided into large administrative units or divisions having on the average seventy

or eighty classrooms each. Each division has its own board of school trustees and the necessary administrative officers. At that time provision was made that urban areas might enter the divisions by agreement. A large number have done this. Each board is responsible for all types of education in its area, except that of handicapped children, from the kindergarten to senior matriculation. As a direct consequence composite high schools with dormitory accommodation are being organized quite generally in the divisions.

All teachers are now trained in the Faculty of Education at the University. The Provincial Institute of Technology and Art at Calgary offers a service intermediate between high school graduation and the Bachelor's degree. This Institute is operated in close affiliation with the southern branch of the Faculty of Education. The province operates Schools of Agriculture at Olds and at Vermilion serving those actually engaged in the business of farming, through demonstrations, clubs, short courses and residential courses carried on through the greater part of the school year.

At the apex of the educational system of the province is the University of Alberta at Edmonton. It occupies a place of great influence in the field of advanced education and in the cultural life of the province. The Banff School of Fine Arts represents an interesting form of the University's extension work. The school meets each summer in the town of Banff, and conducts its classes in art, literature, and music in surroundings as beautiful as can be imagined. It draws attendance not only from Alberta but from every province of Canada,



from many of the United States and even from abroad. The cultural life of the province is also promoted by musical, dramatic, and literary organizations in the principal centres, and by a well established system of public libraries.

Missionaries in the early days and their successors have played an important role in cultural development. All denominations carry on freely, without interference and without discrimination.

The People

The present population of Alberta is 803,330 of which half are of British origin. Other principal races represented in these Canadians include: German, Ukrainian, French, Norwegian, Polish, Swedish, Netherlands, Russian, and at least twenty

other racial stocks. The work of welding has been going on quietly but effectively for nearly forty years; ability, energy, character and gracious manners receive full recognition regardless of racial origin.

The people of Alberta have some qualities of which they may well be proud. The influence of education, the general use of the English language, identification of second generation immigrants completely with the life of the province are contributing factors in successfully eradicating intolerance and race prejudice and in lining up Albertans as good citizens.

When a government, whether municipal or provincial, has outlived its usefulness the people are quick to replace it with new blood. Canadians in other parts of the Dominion sometimes find it difficult to

Proud youngsters of the "Calf Club" exhibiting their favourites.

Alfred Blyth Studios photo





Legislative Building, Edmonton.

H. Pollard photo

understand how the people of Alberta can change so suddenly and turn to new and untried theories. The answer may be found in the fact that the Albertan never shrinks from a new experience just because it is new. He has confidence in the loyalty and patriotism of his neighbours and in his own ability to see that those whom

he entrusts with power do not betray that trust.

The vigorous qualities of its people and the natural resources of the land have built up in Alberta a prosperous province which regards its past only as the foundation for much greater achievements in the future.

* * *

For further information on Alberta, write to:

THE PUBLICITY OFFICE, GOVERNMENT OF THE PROVINCE OF ALBERTA,
LEGISLATIVE BUILDING, EDMONTON, ALBERTA.



Gordon M. Dallyn

A few yards west of Banff Station in the Rocky Mountains, glacier-fed Bow River turns sharply to the southeast and, close to Banff Springs Hotel, cascades as Bow Falls to greet travellers from every continent with the song of the waterfall. Here in graceful bend the Bow unfolds her peacock fan in welcome to the Spray River, her principal tributary on the south, and courses majestically eastward between Tunnel and Rundle Mountains. In the middle distance Mount Brewster and beside her Mount Norquay keep watch.